

Joao Florentine Fernandes Lima

Maranhao, - BRAZIL.

1911 -- 1928

#437

TRANSFER FILE

Plant

TRANSFER FILE

to plant

1911-1928

437



1911-1928

437

TRANSFER FILE  
to Plant



Joao Florentine Fernandes Lima

Maranhao, Brazil.



Arbilla



Maranhão, 15 de Novembro de 1911

Illmos. Snrs. DIRECTORES DA AMERICAN BANK NOTE COMPANY

NEW YORK

Presados Senhores:

Tomo a iniciativa de enviar-lhes conjunctamente a esta, duas amostras d'uma impressão de meu invento, denominada " IMPRESSÃO MULTICOLORIGRAPHICA DE GARANTIA ", destinada especialmente á impressão dos "fundos" usados no papel-moeda, para difficultar a falsificação.

Os caracteristicos do meu invento, consistem na impressão de qualquer gravura de ornato (Guillochês) em diversas côres, não só distribuidas alternadamente pelos traços da gravura, como também em listas que podem ser dispostas em cruzamento, como na amostra n.1, ou no sentido transversal ou longitudinal, como na amostra n.2, ou ainda de quaesquer outras formas e combinações que se deseje e podem ser feitas. As listas podem ser rectas ou onduladas e de larguras differentes. As côres podem ser tantas quantas forem as listas, o que quer dizer que a amostra n.1, que está impressa com 5 côres, podia ser com 16. A impressão é feita d'uma só vez, isto é, entrando o papel uma unica vez na machina impressora.

As vantagens que resultam da impressão alludida, são principalmente duas. A primeira consiste, na extraordinaria difficuldade, senão absoluta impossibilidade que ella offerece á reprodução photographica. Eu me explico. É sabido que o mais poderoso agente que existe para a falsificação das notas de banco, é a photographia. O artista faz uma ou mais ampliações da cedula a copiar, separa os desenhos correspondentes a cada chapa impressa tira de cada um d'esses desenhos um clichê photographico e grava-os em metal, a buril ou a agua forte ou transporta-os sobre pedra e faz a impressão em qualquer machina commum. São estes os meios mais usuaes e nenhum dos processos de impressão actualmente praticados lhes pode resistir, nem a propria gravura em aço, que milhares de vezes tem sido falsificada com mais



ou menos perfeição. Pois bem . Com o meu systema de impressão,que tenho a honra de submeterá apreciação de Vas.Sas.,as coisas ~~de~~ passam de modo muito diverso. Assim,se sobre uma das amostras juntas (a n.1,por exemplo), se imprimir uma gravura a traços mais ou menos finos,empregando-se uma côr conveniente,tornar-se-ha immensamente difficil,senão impossivel,separar esses dois desenhos com fidelidade. E a razão,é que essa impressão ficará constituida por diversas combinações tricolôres successivamente differentes entre si,as quaes produzirão na ampliação phtographica,ainda mesmo com o auxilio dos processos orthocromaticos ou isocromaticos,tal confusão de linhas,que fará desanimar o mais habil e paciente artista. A segunda vantagem consiste em que a impressão alludida só pode sêr feita por meio de um apparelho de minha invenção,que mantenho em absoluta reserva,de modo que nenhuma outra machina se pode prestar para esse fim. Esse apparelho pode ser adaptado a uma machina de um typo já existente,fazendo-se as neccessarias modificações. As duas vantagens citadas são capitaes e tornam a impressão pelo meu systema,muito superior a todas as outras usadas até hoje, pois todas ellas,inclusive a impressão em aço,podem ser facilmente photographadas ou photolithographadas e impressas em machinas conhecidas e de facil aquisição. A impressão de meu invento,pelo contrario,é a unica que pode resistir á reprodução phtographica e tambem a unica que exige uma machina especial. Em resumo,a impressão referida não tem rival no seu genero e pode prestar grandes serviços na fabricação do papel-moeda.

Devo,porem,observar a Vas.Sas. que,se as amostras inclusas não apresentam maior perfeição,é principalmente porque fôram impressas n'um pequeno apparelho de madeira de construção ligeira e rudimentar. Portanto, para que essa impressão attinja o maximo da perfeição,é neccessario que o referido apparelho seja construido de metal,afim de possuir a rigidez e precisão indispensaveis ,construção essa que não posso rwalisar aquí por falta



dos elementos. Em vista do exposto e sabendo que na AMERICA DO NORTE, é aonde mais se sabe valorisar o producto do engenho humano, tomo o alvitre de dirigir-me a Vas.Sasã, afim de propôr-lhes a venda do referido invento, isto é, dos planos para a construção d'um ou mais aparelhos capazes de imprimir "fundos de segurança", em padrões variaveis, pelo systema que acabo de exhibir e descrever a Vas.Sas..

Pego-lhes, portanto, que reflitam sobre as extraordinarias vantagens do meu invento e no caso de lhes convir adquiril-o, queiram dizer-me que vantagens me offerecem .

Aguardando uma resposta qualquer com brevidade, fico a disposição de Vas. Sas. para transmittir-lhes quaesquer explicações que proventura desejarem.

Sem outro motivo, subscrevo-me com a maxima consideração

De Vas.Sas.

Cr2 . Att2. e Veneradôr

*João Florentino Fernandes Lima*

( MEU ENDEREÇO- : RUA DE S. PANTALEÃO n.10 - MARANHÃO - BRAZIL )  
.....



1082<sup>x</sup>

TRANSLATION

Maranhão, November 15th, 1911.

American Bank Note Company,  
New York.

Dear Sirs:-

I take the liberty of sending you herewith two specimens of a printing of my invention called "IMPRESSÃO MULTICOLORIGRAPHICA DE GARANTIA" (Guaranteed Multicolor Printing) which is especially intended for printing in two colors, for use in Bank Notes, to make counterfeiting difficult.

The characteristics of my invention consist in the printing of any ornamental engraving (Guillochês) in different colors, not only distributed alternately by the outlines(?) of engraving, but also in stripes which can be made cross wise, as per specimen No.1, or longitudinal, as per Specimen No.2, or even in any other forms and combinations which may be desired and that can be made. The lines can be straight or curved, and of different lengths. There can be as many colors as there are stripes, or, that is to say, Specimen No.1, which is printed in 5 colors, could be made in 16 colors. The printing is made at one time, that is, putting the paper once only in the printing press.

The advantages obtained from the said printing are mainly two. The first consists in the extraordinary difficulty and absolute impossibility of making photographic reproductions.



I will explain this. I know that the most powerful Agent which exists for counterfeiting Bank Notes is photography. The Artist makes one or more enlargements from the note, to copy, separates the designs corresponding to each printed plate, makes a photographic cut of each of the designs, and engraves them on metal with a graving tool, or by acid, or transfers them to stone, and does the printing on any ordinary machine.

These are the most widely used methods, and none of the printing processes now in use can resist them, not even steel engraving, which thousands of times has been counterfeited with more or less perfection.

Now then, with my system of printing, which I have the honor to submit to you, the result is very different. So that taking one of the specimens herewith ( No. 1 for example) and printing an engraving of more or less fine lines - applying a suitable color, it is extremely difficult to change, which makes it impossible to separate these two designs with exactness. And for this reason said printing will be made permanent, by various three color combinations, each differing from the other, which show up, in the photographic enlargements, and is an aid to the orthochromatic or isochromatic processes, in such confusion of lines as to discourage the most able and patient artist.

The second advantage consists in that the printing mentioned can only be made by means of an apparatus of my invention, which



I hold in absolute reserve; therefore, no other machine can be used for this purpose. This apparatus can be adapted to any type of machine that now exists, making the necessary changes. The two mentioned advantages are the principal ones, and make the printing - through my system - far superior to all the others used to this day, as all of them, including steel printings, can be easily photographed or photolithographed, and printed by well known machines which can be easily obtained.

The printing of my invention, on the contrary, is the only one that can resist photographic reproductions/ and also the only one which requires a special machine. Finally, the printing referred to has no rival of its kind, and can give great service to manufacturers of Bank Notes.

I must state to you that if the enclosed specimens are not more perfect, it is simply because they were printed on a small apparatus of wood of light weight construction, and on one of the first apparatuses. Therefore, in order that said printing should attain the highest perfection, it is necessary that said apparatus should be constructed of metal, in order to possess firmness and indispensable clearness, which construction can not be obtained here owing to the lack of facilities.

In view of the foregoing, and knowing that in North America human inventions are more appreciated, I take the



liberty to address you, in order to propose to sell you said invention, that is, the plans for the construction of one of my apparatuses capable of printing "Security Tints" in various patterns, by the system which I have just described to you.

Therefore, after you have considered the extraordinary advantages of my invention, and in case you care to obtain the same, kindly advise me what you would offer me.

Awaiting a reply/ from you at an early date. and placing myself at your disposal to give you any explanations that you may desire, I remain,

Yours respectfully,

(sgd) Joaõ Florentino Fernandes Lima.

Address:-

Rua de S. Pantaleão No.10,  
Maranhão, Brazil.



Sample

Taken out by  
M. C. C. 5/11/20



Dec. 8, 1911

Shr. João Florentino Fernandes Lima,  
Rua de S. Pantaleão No. 10,  
Maranhão, Brazil.

Dear Sir,-

We have your favor of Nov. 15th, together with specimen of printing by your invention called "Impressão Multi-colorgraphica de Garantia".

We have read the claims you make for this new process, studying the same carefully; but fail to find the security which you think it carries. We cannot therefore make use of this process, as we do not consider it to be a perfect guarantee against counterfeiting.

We thank you, however, for calling our attention to the same, and only regret that we cannot make any use of it.

Yours very truly,

General Sales Manager







## FOREIGN DEPT.

JOÃO FLORENTINO FERNANDES LIMATranslation

S. Luiz, Maranhão, Apr. 9, 1923

American Bank Note Co.,  
N.Y.

Dear Sirs:-

MAY 8 1923

In November 1911 I took the liberty of sending you a letter with two small specimens of a new system of printing of typographic engraving called "Impressão multicolorigraphica de Garantia" (Security multicolor printing), of my invention, applicable, principally, to printing of multicolor backgrounds in the making of paper money, so as to render counterfeiting more difficult.

The said specimens, which were printed on a small apparatus of my invention, did not show the maximum perfection that could be attained and much less, all the forms of application which could be carried out, since they were simple preliminary demonstrations of the invention in its two component and distinct parts - artistic and mechanic.

The samples mentioned consisted in the printing of an ornamental engraving (Guilloché) (lathe work), having as a fundamental basis the interposition of the colors and application of stripes (?) combined of various forms, that is, the colors were distributed alternatively by the lines of the engraving and simultaneously in stripes, forming combinations of colors - interposed and successively different one from the other - in one design.

Your company, in a letter signed on December 8th of the same year, wrote me that - having experimented and examined said invention carefully, the conclusion was arrived at that it did not give the result which I had claimed, that is - same did not guarantee - with greater efficacy - paper money against counterfeiting, or which meant - that you did not find it worth while.

Being surprised to receive such a reply, which was unexpected from



such competent authorities in the profession, and being firmly convinced of the value of my work, by the perfect knowledge of technical matters which inspired same, I deemed it best to await developments and did not reply.

It so happens, however, that about two years ago, more or less, there were placed in circulation notes of Mil Reis of the 10th, 2 Milreis of 12th and 10, 20, 100 and 200 Milreis of 14th Estampa of the Brazilian Treasury, made by the American Bank Note Company, with "multicolor tints",- the principal characteristics of which are exactly similar to those of my system of printing,- since they are also printed with the interposition of the colors, these being distributed alternately by the lines of the engravings and simultaneously in stripes forming brilliant combinations - successively different one from the other - in one single design.

The only difference, otherwise apparent, which can be alleged would be - that the samples which I sent to your company in 1911 had the lines in juxtaposition, crossed, or were not printed by a special apparatus, of my invention, since the "multicolor tints" of the above mentioned notes, have the iridescent lines - that is, by the fusion of the color and their being printed on machinery already known.

This allegation, however, (in case it should have been made to me - which I would not expect from you, would only amount to a sophism) would not have any value whatever.

First - because the interposition of colors, that is - their distribution alternatively symmetric or unsymmetric by the lines of an engraving - being the main conception of my invention and one of its principal characteristics, the mere fact of your using this basic part of my invention - without which you could never have printed "Multicolor tints" as you are doing, would amply suffice without any other reasons to give me full right to make a claim against you.



10  
Second - Because your use of iridescent lines ( in my printing method it does not by any means constitute a novelty, even if this use has not been foreseen by me, as it was - and I shall prove it further on) is simply a modality of application that does not in any way alter the fundamental or characteristic principle of the invention referred to, which as said above, consists in the interposition of the colors and in the application of lines of various forms, which does not change in any way the fundamental basis of principal characters of the invention mentioned. This consists, as already stated, of the interposition of colors and the application of lines of various forms. Furthermore, as iridescent printing - which is a succession of colors in interwoven lines was known long ago and used for ordinary work before its application to my system, it was, for this very reason, implicitly understood and so clear - so evident, that no reference was required, since nothing could escape the eye of an intelligent professional - as in fact it did not escape you, who were the only ones ~~xxx~~ to whom I showed samples of my work.

Third - because you have done and are still doing the printing to which reference is made by the iridescent form, without having recourse to the apparatus of my invention, and for the simple reason that this complementary form of printing of my invention is of easiest execution and also can be doubled - not only on this my said apparatus but on the machines of double and triple effect; ~~that~~ there are many now that are known and one of the style which you are using. It must be noted, however, that the use of this or that machine is of no importance whatever, inasmuch as a wrong is a wrong - no matter what means are used to commit it.

12  
Fourth - finally - because the application of iridescent lines of my system of printing was in 1911, as stated above, foreseen and made integral part of my invention, which I can prove with proper papers, since it is recorded in the records of the Ministerio da Industria - relating to ~~pat~~ patent granted to me by the Brazilian Government for the invention in question, the final part of which records I transcribe



for your information:-

"Finally, I claim as characteristic parts of the present invention:

13 1st - a system of printing typographic engravings by contiguous lines of various colors and at one time,- that is - the paper enters but once into the respective printing press - and different colored combinations can be formed one from the other,- the colors being distributed alternately symmetric or unsymmetric through the engraved lines, which can be made straight, curved or in any other form desired - all in one single design.

14 2nd. A system of printing, as described in No.1 - having the lines crossed, forming bi-colored combinations - different one from the other, ~~in~~ in one single design, etc.

15 3rd - A system of printing as described in No.1 - having the lines interwoven in each other, etc.

16 4th - a system of printing as described in No.1 - having the lines inlaid - in a predominating color.

17 5th - A system of printing as described in No.1 - having the lines each in a single color, but they can be made iridescent as in Nos.2,3 and 4 of this claim, which also could be printed in iridescent lines, that is - with two or more colors fused one with the other as in the solar spectrum.

18 Now then, by that which I have explained above, which specifies the truth in all its parts, it is amply and incontestably proved that the "multicolor tints" which you are at present using in the manufacture of Brazilian paper money and probably on that of other countries, are genuinely my invention, since they evidently constitute one of the modalities of application of the invention - perfectly defined and legally registered long before.

And your having - by virtue of the samples which I sent you, put this



19 invention into practice, which was my exclusive property, without any concession whatever on my part, committed - incontestably, a violation of confidence and making use of my work and of my right, which work has been greatly admired; and as this procedure of yours is singularly in contrast with traditional reputation which the Americans enjoy in Brazil, who are generally serious, correct and always willing to pay liberally for useful inventions in any line of human activity.

20 This procedure is all the more surprising from an industrial enterprise such as that over which you preside, which - more than any other, should merit and maintain integral and unassailable the universal confidence from any point of view.

21 D Meanwhile, I must emphasize - I cannot yet in any form whatever believe that your company would be capable of any intentional illicit or prejudicial act, no matter toward whom and that, being moved by egoistic impulses, to save your company great expense you should fail to hesitate at exposing your credit or prestige to awkward contingencies before the world. No, such assumption seems out of the question.

22 I sincerely believe that having finally recognized as you will recognize and attest in practical and public manner, that the invention referred to is of real value and wishing to communicate with me but ignoring my whereabouts at the time, 8 years having already passed, you were loathe to any longer forego the incomparable advantages offered by my invention and decided to use it in as far as it could be adapted to your machines, awaiting my claim for loss and damage caused me, which is pure justice and must be on your conscience.

23 This is the hypothesis which I admit because it is also the only one which can justify the procedure of your company.

Therefore, finding myself greatly prejudiced owing to the fact above mentioned, because of your having initiated and explored the invention in question - without my consent - thus claiming priority and depriving me of moral and material



24 profits which I could have gained therefrom and which should have come to me - being the one and only author - I resolve, before taking any other steps, to hereby make a claim of you and in the best of harmony, for indemnity to cover the damage which you caused me and which is of no small import, being that it makes it impossible for me to effect any advantageous ~~in~~ business in connection with the invention in question, from the fact that it is depreciated by the exploitation, in part it is true, which you have made of it.

25 And my claim which I now make being so just and reasonable I am fully convinced that it will be accepted with so much greater pleasure - you having proceeded as you did - in assuming, morally and tacitly, a compromise of honor with me, which you will undoubtedly fulfill properly and with dignity.

26 You cannot deny that my mental and material labor has been the means of permitting the achievement of ~~pro~~ progress of the greatest value to your enterprise.

27 It now remains to be seen how far your conscience will lead you.

28 I would thank you to let me know for my future guidance if you are disposed ~~can~~ to honor my claim and remain

Yours, etc.

(sgd) João Florentino Fernandes Lima

Address:-

Rue 28 de Julho N.30  
S.Luiz - Maranhão  
Brazil, S.A.

(IW)



S. Luiz, Maranhão, 9 de Abril de 1923.

Senrs. Directores do American Bank Note Company.

New York. N.A.

Prezados Senrs.

Em Novembro de 1911 tomei a resolução de enviar a essa illustre directoria, uma carta submettendo á sua apreciação duas pequenas amostras d'um novo systema de impressão de gravuras typographicas denominado "Impressão Multicolorigraphica de Garantia" de minha invenção, applicavel principalmente á impressão de fundos multicôres, na fabricação de papel moeda, afim de garantil-o com mais efficacia, contra a falsificação.

As referidas amostras, que tinham sido impressas n'um pequeno aparelho de minha concepção, ainda não representavam, como é intuitivo, nem ao maximo de perfeição a que podiam attingir e muito menos, todas as formas de applicação que podiam ser operadas, porque não passavam de uma simples demonstração preliminar do invento nas suas duas partes componentes e distinctas - artistica e mechanica.

As amostras mencionadas eram constituidas pela impressão multicôr d'uma gravura de ornato ou "giollochê", tendo por bases fundamentaes a interposição das côres e a applicação de listas combinadas de varias formas, isto é, tinham as côres destribuidas alternadamente pelos traços da gravura e simultaneamente em listas, formando combinações de côres entremeadas e successivamente differentes umas das outras, num só desenho.

Essa illustre Directoria, numa carta firmada em oito de Dezembro do mesmo anno, fizera-me sciente de que, havendo experimentado e examinado com attenção o dito invento, chegara á conclusão de que este não dava o resultado que eu lhe havia afirmado, isto é, não garantia, com mais efficacia, o papel moeda contra a falsificação, o que significava não lhe haver encontrado mericimento algum...

Surprehendido com semelhante resposta, que não esperava de profissionaes tão competentes, mas, firme e inabalavel na convicção do valor do meu trabalho, pelo perfeito conhecimento dos motivos de ordem technica que o haviam inspirado, julguei preferivel aguardar os acontecimentos e nada retorquir.

Acontece, porem, queha dois annos, mais ou menos, começaram a ser lançadas em circulação, notas de mil reis da decima, dois mil reis da decima segunda, e de dez, vinte, cem e duzentos mil reis, da decima quarta estampas, do Thezouro brasileiro, fabricadas pelo American Bank Note Company, com "fundos multicôres" cujos principaes caracteristicos são exactamente semelhantes aos do meu systema de impressão, pois que são tambem impresses com a interposição das côres, destribuidas estas alternadamente pelos traços das gravuras e simultaneamente em listas formando combinações coloridas successivamente differentes umas das outras n'um só desenho...

A unica differença, aliás aparente, que se me poderia allegar, seria de que, as amostras que confiei á essa illustre Directoria em 1911 tinham as listas em juxtaposição, cruzadas ou não e haviam sido impressas num aparelho especial, de minha concepção, enquanto que os "fundos multicôres" das notas acima citadas têm as listas iriadas ou pela fusão das côres e são impressas em machinas já conhecidas.

Essa allegação, porem, se acaso me fosse feita, o que aliás não é de esperar do criterio e consciencia de V.V.S.S., não passaria de um sophisma e não teria valor algum.

Primeiro porque, sendo a interposição das côres, isto é, a destribuição destas em alternativas symetricas ou asymetricas pelos traços de uma gravura, a concepção primacial da minha invenção e um dos seus principaes caracteristicos, como está mais que evidente, só o facto de V.V.S.S. se estarem utilizando dessa parte basilar do meu invento - sem a qual jamais teriam podido imprimir "fundos multicôres" conforme o estão fazendo bastaria fortemente, se outras razões não houvessem, para dar-me pleno direito a uma reclamação.

Segundo porque o emprego por V.V.S.S., de listas iriadas, no meu systema de impressão, não constitue absolutamente nenhuma novidade, pois ainda mesmo que esse emprego não houvesse por mim sido previsto, como effectivamente o foi e adiante o prevarei, não passaria, como realmente não passa, d'uma simples modalidade de applicação que não altera, de for-

FOREIGN DEPT.



MAY 8 1923



ma alguma, as bases fundamentaes ou caracteristicos principaes do invento alludido que consistem como já disse--na interposição das côres e na applicação de listas de varias formas. Ademais sendo a impressão iriada--que é uma successão de côres em listas fundindo-se ou mesclando-se umas nas outras--já muito antes conhecida e até usada em trabalhos ordinarios, a sua applicação ao meu systema estava, por isso mesmo, implicitamente comprehendida e tão clara, tão evidente, que dispensava qualquer referencia, visto que não poderia escapar á visão de nenhum profissional intelligente como de facto não escapou á de VV.SS. que, aliás, --foram os unicos a quem confiei amostras do meu trabalho.

Terceiro porque se VV.SS. têm feito e estão fazendo, a impressão de que se trata, pela forma iriada, sem necessitarem do aparelho de minha invenção, é pelo facto muito simples de que, essa forma complementar da impressão por mim concebida, é a de mais facil execução e tambem a que pode ser duplamente realisada, não só nesse meu dito aparelho como nas machinas de duplo ou triplice effeito, já ha muito conhecidas e um de cujos typos VV.SS. se utilizam, sendo, entretanto, muito para notar-se que, no caso vertente, o uso desta ou daquela machina, não tem a menor importancia visto que, a differença dos meios empregados para commetter-se uma falta não pode influir para justificar essa falta.

Quarto, finalmente, porque a applicação de listas iriadas no meu systema de impressão, já em 1911 tinha <sup>pois</sup> sido prevista, como acima o afirmei e fáz parte integrante do meu invento, o que poderei provar exuberantemente com documentos officiaes, pois consta do memorial descriptivo, depositado na Repartição competente do Ministerio da Industria, relativo á patente que me foi concedida pelo Governo Brasileiro, para o invento em questão, cuja parte final aqui transcrevo para sciencia de VV.SS.

Eil-a:-- "Finalmente reivindico como partes caracteristicas da presente invenção: 1<sup>a</sup> Um systema de impressão de gravuras typographicas feita em listas juxta-postas de diversas côres e de uma só vêz, isto é, entrando o papel uma unica vêz na respectiva machina impressora, podendo formar combinações coloridas differentes umas das outras, tendo as côres destribuidas em alternativas symetricas ou assymetricas pelos traços da gravura, podendo ainda as referidas listas serem rectas, onduladas ou de quasquer outras formas convenientes, tudo num só desenho.

2<sup>a</sup> Um systema de impressão, como descripto no n° 1 tendo as listas cruzadas formando combinações bicolôres differentes entre si num só desenho, etc.

3<sup>a</sup> Um systema de impressão como descripto no n° 1, tendo as listas entrelaçadas umas nas outras etc.

4<sup>a</sup> Um systema de impressão como descripto no n° 1, tendo as listas embutidas numa côr predominante.

5<sup>a</sup> Um systema de impressão como descripto no n° 1, tendo as listas cada uma de uma só côr, podendo, entretanto, serem iriadas assim como os numeros 2, 3, e 4 desta reivindicação que tambem podem ser impressos em listas iriadas, isto é, com duas ou mais côres fundindo-se umas nas outras como as do espectro solar.

Ora, pelo que fica acima exposto, que é a expressão da verdade em toda a sua plenitude, está sabejamente provado, sem contestação alguma possivel, que os "fundos multicôres" que VV.SS. estão actualmente empregando na fabricação de papel moeda brasileiro e provavelmente de outros paizes, são genuinamente de minha invenção, pois constituem, evidentemente uma das modalidades de applicação desse invento perfeitamente definida e legalmente registrada com muita antecedencia.

E tendo VV.SS. em virtude das amostras que lhes confiei, posto em pratica essa invenção de minha exclusiva propriedade, sem concessão alguma de minha parte, commetteram incontestavelmente um abuso de confiança e estão praticando uma usurpação do meu trabalho e do meu direito, o que muito me tem admirado, pois que esse procedimento de VV.SS. contrasta singularmente com o tradicional conceito de que gosam, no Brazil, os americanos, na generalidade serios, correctos e sempre dispostos a pagarem liberalmente as aquisições de inventos uteis em quasquer ramos da actividade humana.

E é tanto mais para admirar esse procedimento quanto é certo que, uma empreza industrial do genero da que V.V.S.S. dirigem, deve, mais que qualquer outra, merecer e manter integral e inatacavel, a confiança universal sob qualquer ponto de vista.

Entretanto, devo bem acentual-o, --não posso ainda, de forma alguma, acreditar que essa illustre Directoria seja capaz de qualquer acto intencionalmente illicito ou prejudicial a quem quer que seja e que, movida per impulsos egoisticos, para poupar a sua empreza a um dispendio



avultado embora de utilidade, não hesitasse expor o seu credito, o seu prestigio, a contingencias desairosas e deprimentes perante o mundo. Não. Semelhante hypothese me parece inaceitavel.

Acredito sim e muito sinceramente, que tendo VV.SS. reconhecido, finalmente, como de facto reconheceram e o attestaram de modo pratico e publicamente, que o invento de que se trata tem realmente valor e desejando a mim dirigir-se para tratarem desse assumpto, mas, ignorando onde eu estivesse então residindo, por isso que, já eram passados mais de oito annos e, para se não privarem por mais tempo das incomparaveis vantagens que, no genero, effectivamente offerecem os "fundos" de minha invenção, resolveram pôr esta em pratica, na parte em que podiam empregar as suas machinas, aguardando que lhes fizesse a minha reclamação afim de me indenisarem pelas perdas e danos causados, como é de inteira justiça e deve estar na sua consciencia.

Esta sim é a hypothese que admitto porque é tambem a unica que pode justificar o procedimento dessa illustre Directoria.

Assim pois, achando-me altamente prejudicado com o facto, já mencionado, de haverem V.V.S.S. iniciado a exploração do invento alludido, sem o meu consentimento, chamando-a a si a prioridade do mesmo e os preventos moraes e materiaes que eu poderia tirar d'elle e só a mim deviam caber, na qualidade de seu unico e verdadeiro autor, resolve, antes de outra iniciativa, reclamar de VV.SS., por meio desta e na melhor harmonia, uma indemnisação na altura dos prejuizos que me causaram e que não são de pequena monta, visto que me ache impossibilitado de effectuar, com outrem, um negocio vantajoso com o invento de que se trata, pelo facto de achar-se este prejudicado e desvalorizado com a exploração, parcial embora, que estão fazendo do mesmo.

E sendo tão justa e razoavel a reclamação que ora faço, tenho plena convicção de que será acolhida com tanto maior agrado quanto, havendo procedido conforme procedeu, essa illustre Directoria, assumira desde logo, moral e tacitamente, um cumprimento de honra para comigo, de qual terá, com certeza, o maior empenho em desobrigar-se cabal e condignamente.

Que concorri com o meu trabalho mental e material para um notavel progresso e maior destaque para a sua empresa, é o que não tem a menor duvida e VV.SS. não poderão negar.

Resta-me, porem, saber até onde chega a sua consciencia.

Peço-lhes, portanto, que me digam se estão ou não resolvidos a me fazerem a indemnisação que reclamo, afim de que eu saiba a iniciativa que devo tomar.

Aguardando a sua resposta, subscrevo-me com toda a consideração

De Vas. Sas.  
Amigo Obrigado e Attencioso.

*João Martinho Fernandes Lima*

Endereço.

Rua 28 de Julho N.30  
S.Luiz - Maranhão.  
Brazil S.A.



June 6th 1923.

C. P. R.  
DEC 12 1923

Mr. H.R. Treadwell.,  
Mgr. Eng. Dept.,  
Dear Sir:

In answer to a translation of a letter from Mr. Joao Florentno Fernandes Lima, of Brazil S.A., and handed me by Mr. A.S. Major, priority claims are made on the method used by us to produce the Major Tint Work, as used on the Brazilian Treasury Notes, Vis, 1 Mil Reis of the 10th Estampa 1918 issue, 2 Mil Reis of the 12th Estampa 1918 issue, 10,100,200, Mil Reis of the 14th Estampa 1918 issue, and the 20 Mil Reis of the 14th Estampa 1920 issue.

I regret to say that the main points in his claim seem to conflict somewhat with ~~our~~ method and not having at hand any material showing our claims on the Major Tint Work, it would be absurd for me to attempt any comparisons on the technical points; so I am only able to show where the claims differ from our method by reference to my records of the preliminary experiments and tests for counterfeiting.

In the third paragraph of the letter he refers to the two samples or specimens sent in 1911, as "guilloche lathe work"; these were probably produced on an ordinary ruling machine with a special form.

The main part of our work which we produce from geometrical lathe work by a special combination of processes original with the Company in 1914, and as hereafter shown dates back to work done in 1880.

The irregular wave ruling surrounding the lathe work in the notes referred to above, the lines have not the twisted rope effect that he has alluded too; but they are crossed diagonally in continuous lines.

A similar process for blending and softening the various color bands was used by the Company in 1880, for tobacco labels and known as the Mac Donough process.

Another method used by the Company in 1890. known by us as "multicolor work" two or three interlocking solid form plates were used that were inked up in the various colors separately then taken up in register on one roller to be deposited to a plate having a complete design of lathe work, lettering etc., in relief.

The printing then being done in one operation, the colors showing accordingly.



This process was later applied to stone printing and found more economical, and is used at present on some orders.

This is based on the old Russian Orloff system.

In paragraph six, fifth line, he speaks of our notes being "exactly similar" to those of his system of printing, they may be similar, but not "exactly". Our method of executing the lathe work is by an alternate system of blocking out, to get the desired effect. A similar but cruder method is practiced generally in the printing and photo-engraving trade, for the production of colored labels and car advertising signs, also by Whitehead & Hoag Co., Newark N.J., for celluloid novelties.

In paragraph seven, he refers to his special apparatus for printing his specimens; nevertheless it can be done on a Universal press.

Paragraph nine, refers to the interposition of colors symmetric or unsymmetric, this can also be antedated by specimens on hand of various colored irregular rulings made by the Company in 1896.

Paragraph ten, refers to the application of iridescent printing not being foreseen by him, but he also practically admits that it "was known long ago and used for ordinary work". I refer back again to our MacDonnough process of 1880.

Paragraph eleven, refers again to our iridescent form of printing as being "complimentary" to the work, he also endeavors to praise, but finally belittles its use.

In paragraph seventeen, he again tries to strengthen this point by stating the possibility of printing the iridescent lines "with two or more colors fused one with the other as in the solar spectrum".

Therefore it seems evident that there is not sufficient grounds for any claims, as our process for the Major Tint Work is a re-arrangement of old methods used by the Company since 1880 combined with other processes used, and well known in the printing and photo-engraving trades for many years prior to 1911 and which by careful and technical handling we have successfully applied to Banknotes etc.,.

Going still further back to the old days of color printing you may possibly consider the work done by Moreelse in 1612 known as "chiaroscuro"; it is a method of printing engravings in which separate blocks were used to make different shades or tints, and I have a specimen of his engraving in several colors, that was very highly prized by the Newark N.J., public library.

The specimens furnished are numbered one and two, number two has nine vertical color bands, that are formed by two sets of five lines forming a pattern, and printed contiguously in two different colors. There is one all over printing in red; the same ruling is then divided and registered in juxtaposition showing the vertical bands referred to, in several color combinations.

Specimen number one is produced from the same ruling there are nine vertical bands and seven horizontal bands, these bands show an under and over effect at the intersections, due to the colors used.



As this seems to be the most complicated I have taken it for the photographic tests, at the same time showing an analysis of the process used in its production.

Enclosed herewith are five <sup>✓</sup> photographs showing the various bands of color as marked.

Photographs number one and two show the horizontal bands in parallel; numbers three ~~and~~ four and five represent the vertical bands which are also in parallel.

They indicate the method used to divide the ruling into separate colors and shows the arrangement of the plates which were registered so that one set of colored lines are superimposed; and in juxtaposition to the other of a different color.

The printing being done in one operation from split fountains and rollers.

Hoping this meets with your satisfaction and covers the main points.

Sincerely Yours

*Joseph A. Ford*

Supt. Photo & Process Dept



Enclosures with  
Mr. Ford's letter

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Specimens #1. and #2

---

5 photos of various  
bands

---

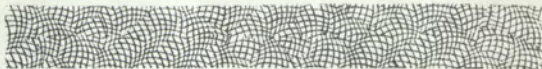
and

1 card (pencilled on back)  
"4-20-23"  
"5-8-47"





*yellow*



*yellow*



*yellow*





*light green*



*Blue*



*Purple*

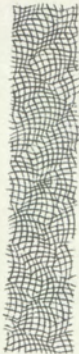


*light green*





Red



Red



Red





Purple



Blue





*light olive*



*olive*

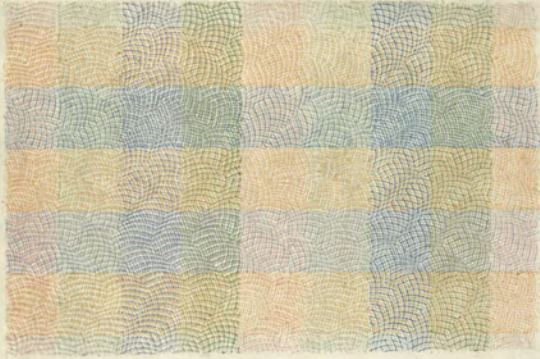


*light olive*



*olive*



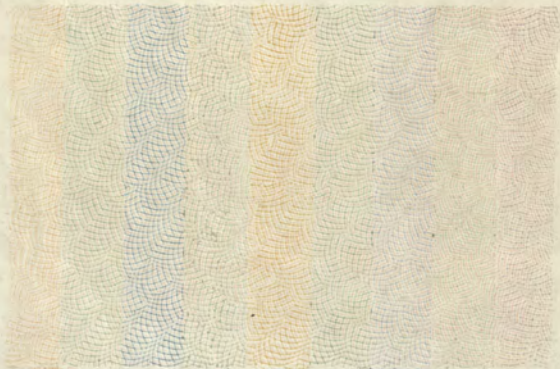


YELLOW BLUE YELLOW BLUE YELLOW BLUE YELLOW BLUE

RED GREEN BLUE GREEN RED

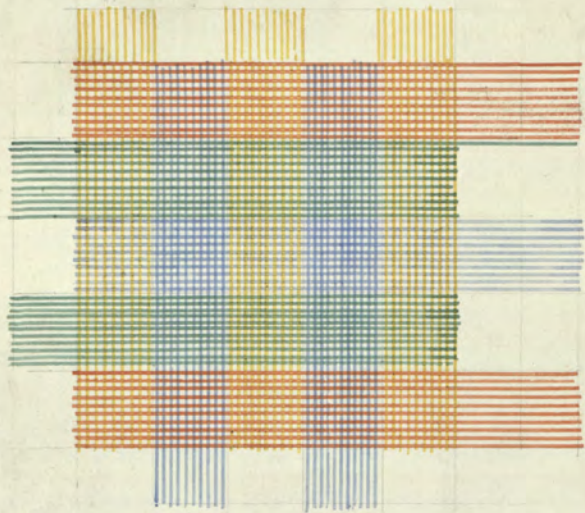
no 1





n<sup>o</sup> 2

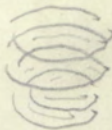






4-20-23

5-F7247



DEC 12 1923





FOREIGN DEPT.

JOAO FLORENTINO FERNANDES LIMA

Translation

Maranhão, Oct. 20, 1923.

A.B.N.Co.

N.Y.

Dear Sirs:-

I wrote you a letter six months ago, of which I hold a receipt, - claiming indemnification due to the fact that you were using in the manufacturing of paper money, multicolor tints of my invention, without any concession on my part, and - notwithstanding that such a long time has elapsed you still do not wish to give me the honor of a reply. Well then - as I do not know precisely to what to attribute this long silence and as it is not possible for me to wait indefinitely, I now point out to you that if during the course of two months, counting from this date, I do not receive a satisfactory reply from you, I shall make representations to the Brazilian Government and publish a protest in the press of Rio de Janeiro, supported by documents, - and shall also use other means in case of necessity.

I should very much like to settle this matter in a friendly way and if I am unable to do so the fault will not be mine.

Continuing, in the meantime, to believe that I am dealing with men of conscience, honest and worthy, I remain,

Yours, etc.

Joao Florentino Fernandes Lima

Rue 28 de Julho, 30.

(IW)



Maranhão, 20 de Outubro de 1923  
FOREIGN DEPT.

Snrs. DIRECTORES do AMERICAN BANK NOTE COMPANY



BROAD STREET 70-72  
NEW YORK.

Presados Snrs : NOV 23 1923

Fazem seis mezes que lhes escrevi uma carta, da qual tenho recibo, reclamando uma indemnisação pelo facto de estarem empregando, na fabricação de papel moeda, fundos multicores de minha invenção, sem nenhuma concessão da minha parte, e, apesar de tão longo tempo decorrido, ainda me não quizeram dar a honra de uma resposta. Pois bem. Como não sei precisamente a que deva attribuir tão demorado silencio e me não seja possivel esperar indefinidamente, venho scientificamente-os de que, se dentro do praso de dois mezes, a contar desta data, eu não receber uma resposta satisfactoria de VV.SS., farei uma representação ao Governo Brasileiro e a publicação de um protesto documentado pela imprensa do Rio de Janeiro, aguardando-me ainda para agir por outros meios, se acaso houver mister.

Bem quisera liquidar este assumpto amigavelmente, mas, se não o puder conseguir, a culpa não será minha.

Continuando, entretanto, na crença de que trato com homens de consciencia, honestos e dignos, mais uma vez subscrevo-me

De VV.SS.

Amigo Obrigado & Criado

*João Florentino Fernandes Lima*

Rua 28 de Julho, 30.



MODELO N. 45  
(antigo 7 e 18)

# SERVIÇO POSTAL



Carimbo de Correio  
de origem

Numero do registrado 26274

Procedencia Leiria

Data do registro 22 de 10 de 1928

Natureza da correspondencia C

Valor declarado \_\_\_\_\_

*Recebi o objecto registrado acima descripto.*

Em \_\_\_\_\_ de \_\_\_\_\_ de 19 \_\_\_\_\_

O DESTINATARIO



Carimbo de Correio  
distribuidor

NOTA — Este recibo deve ser datado e assignado á Hsta.



MODELO N. 45  
(antigo 7 e 18)

# SERVIÇO POSTAL



Carimbo de Correio  
de origem

Numero do, registrado 26 274

Procedencia Luiz

Data do registro, 22 de 10 de 1923

Natureza da correspondencia \_\_\_\_\_

Valor declarado \_\_\_\_\_

*Recebi o objecto registrado acima descripto.*

Em \_\_\_\_\_ de \_\_\_\_\_ de 19 \_\_\_\_\_

O DESTINATARIO



Carimbo de Correio  
distribuidor

NOTA — Este recibo deve ser datado e assignado á tinta.



UNITED STATES AND  
FOREIGN  
PATENTS AND  
TRADE MARKS

FRANK T. WENTWORTH  
PATENT AND TRADE MARK CAUSES  
2 RECTOR STREET, NEW YORK

CABLE ADDRESS:  
"FROWENPAT" NEW YORK

TELEPHONE:  
0284 RECTOR.  
8037 WHITELAND

December 11th 1923.

*Copy to Mr. Lima  
J. Lane sec.*

American Bank Note Company,  
70 Broad Street,  
New York City.

Gentlemen:-

In compliance with your request for a written report on the situation in connection with the claim of Mr. Lima for compensation because of your use of multicolor safety tints, I have to submit the following report:-

The use of the line safety designs made by geometrical machines is so old as not to be made the basis of any claims by anybody at the present time. The use of such geometrical designs in color work goes back at least thirty years, and there have been many refinements in this class of work.

Enclosed herewith for your consideration, is a copy of U. S. Patent to Woodward, of March 21, 1893, No. 493,850, which shows the arrangement of parallel lines closely positioned so as to secure blended effects. In fact about the time of the issuance of the Woodward patent, multicolor work was very generally being done in this country, in which the effects were secured by means of photo-engraved plates, each of its own color.

I also enclose copies of the patents to Ives, No. 776,470, of Nov. 29, 1904, and No. 776,515, of Dec. 6, 1904, both of which show the development of the Woodward patent along the lines of safety tints for bank notes or other purposes.

Furthermore, long prior to the issuance of the Ives patents and, to my positive recollection, dating from no more than three years thereafter, you yourselves were printing safety tints composed of geometrical lathe work in a plurality of colors at a single impression.

Mr. Lima cannot, therefore, advance any claim against you for the multicolor tints made at a single impression.

In view of the general tone of Mr. Lima's letter, I am unable to determine whether or not he has reference to your latest development in safety tint work, and I fancy that such is not the case, because upon careful inspection of specimens of his work, there is no resemblance whatever between these specimens and the work which you are doing at the present time, and these specimens lack those characteristics relied upon by you for safety in preventing counterfeiting.



**FRANK T. WENTWORTH**  
PATENT AND TRADE MARK CAUSES  
2 RECTOR STREET, NEW YORK

CABLE ADDRESS:  
"FROWNPAT" NEW YORK  
TELEPHONE:  
0284 RECTOR  
5637 WHITEHALL

December 11th 1923.

Page 2.

American Bank Note Company.

Mr. Lima refers to his use of geometrical lathe work in an engraving, while in the work you are now doing, while the lathe design is used, the actual imprint is not of such a design, but of an entirely different character and one which cannot be reproduced by a lathe, and you do not use engraved plates in making the tints.

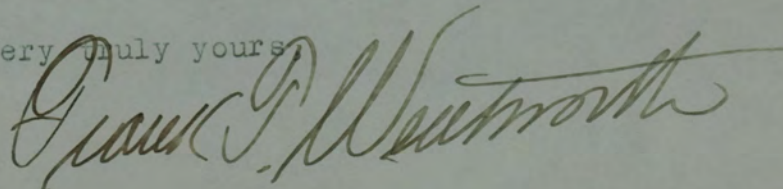
I feel that perhaps Mr. Lima's letters were written under a misapprehension as to the true condition, and that he was laboring under the impression, when he wrote the letters, that multicolor safety tints were of his origin, while as a matter of fact they go very far back of any possible date to which Mr. Lima refers.

Above I have referred solely to the character of safety tints you are now using, as compared with those known prior to your adoption of this form of tint, and as compared with the specimens Mr. Lima furnished, but have not dealt with the technical side of the case.

Mr. Lima has absolutely no claim in the United States, except such as might be based upon U.S. patents, and in fact no claim in Brazil, unless he has existing patents in that country. In his correspondence Mr. Lima does not refer to any Brazilian patent, except in a very general way, and I doubt if he has a Brazilian patent at the present time which could be enforced, particularly in view of your old Brazilian notes using the multicolor tints made in practically the same way, which Mr. Lima apparently made the basis of his claim.

Since you do not follow the methods referred to by Mr. Lima, I cannot see that he has either a legal or a moral claim upon you for any compensation, and Mr. Lima should be allowed to present any claims to the Brazilian Government, upon whose order you did the work, and I think that the officials in Brazil will be able to determine at a glance that the work they are receiving from you is entirely different from anything ever contemplated by Mr. Lima.

Very truly yours,



FTW:K  
ENC.



Woodward patent 493850

Ives patents

#776470 and #776515



W. Hall  
file

IVES - #778,515.

0 8 8  
2 2 8 1 2 3



No. 776,515.

PATENTED DEC. 6, 1904.

F. E. IVES.  
SAFETY COMPOSITE COLOR PRINT.

APPLICATION FILED SEPT. 14, 1903.

NO MODEL.

Fig. 3.



Fig. 1.

	H	G	F	b	E	D	C	B	a	A	
1											Rhodamine Pink Methyl Blue
2											Capri Blue Methyl Blue
3											Capri Blue Victoria Green
4											Brilliant Yellow Victoria Green
5											Eosine Red Methyl Violet
6											Eosine Red Naphthol Orange
7											Rhodamine Pink Methyl Violet

Fig. 2.

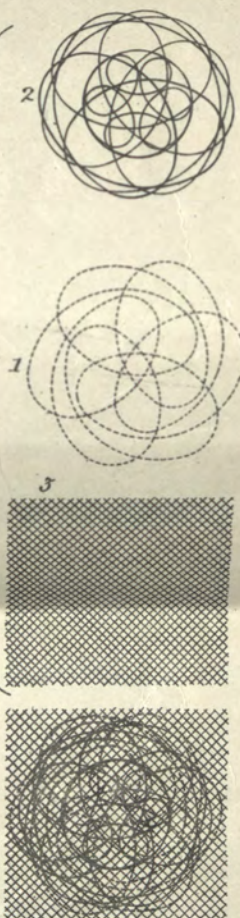


Fig. 4.

Witnesses:

Louis H. Buck  
Titus H. Gross

Inventor:  
Frederic E. Ives.  
by his Attorneys  
H. S. & H. S.



## UNITED STATES PATENT OFFICE.

FREDERIC E. IVES, OF WEEHAWKEN, NEW JERSEY.

## SAFETY COMPOSITE-COLOR PRINT.

SPECIFICATION forming part of Letters Patent No. 776,515, dated December 6, 1904.

Application filed September 14, 1903. Serial No. 173,139. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERIC E. IVES, a citizen of the United States, residing in Weehawken, New Jersey, have invented certain improvements in Safety Composite-Color Prints, of which the following is a specification.

The object of my invention is to provide a composite-color design made up of well-differentiated hues of such character as will make it difficult or impossible to reproduce separately one or more of its elements by a photographic process, thereby preventing reproduction of the design by photomechanical means.

In the accompanying drawings, Figure 1 is a diagrammatic view illustrating the relation to the solar spectrum of different combinations of colors which I may use in carrying out my invention. Fig. 2 is a view showing different elements of a safety composite-color print made in accordance with my invention. Fig. 3 is an exaggerated section of part of the complete print, and Fig. 4 is a view showing superposed the different elements of the composite print.

In carrying out my invention I print different designs in different colors superposed upon the same surface, preferably with crossing and interweaving of the lines of the different designs, thus forming a composite-color design. It is desirable that the colors or designs employed should have quite distinctive hues, so that each may be readily recognizable as a characteristic feature of the composite-color print. Such composite-color designs can be made which are not proof against photographic dissection, because each color absorbs strongly some spectrum-ray to which every other color is transparent. In place of such a combination, therefore, I employ inks in pairs which while well differentiated in hue absorb similar spectrum-rays. I preferably employ in each pair a key color and a check color, the latter absorbing those spectrum-rays which are absorbed by the lighter or key color, so that the key-color design cannot be photographed as black without at the same time photographing as black the companion or check color design of a different hue.

Pairs of colors more or less perfectly meeting the aforesaid requirements are as follows, the first color of each pair being a key color and the second a check color: rhodamine-pink and methyl-blue, capri-blue and methyl-blue, capri-blue and Victoria green, brilliant yellow and Victoria green, eosin-red and methyl-violet, eosin-red and naphthol-orange, rhodamine-pink and methyl-violet. The relation of these colors to each other is shown in Fig. 1, in which 1 2 3 4 5 6 7 represent divisions of the visible spectrum of sunlight, the vertical lines being the Fraunhofer lines, which serve as natural divisions between the most distinctive spectrum colors and the heavy horizontal black lines representing the relative spectrum absorption of the printing colors named at the right. It should be understood that this representation of the various absorptions is merely diagrammatic. Any number of such colors may be used to print separate designs to form characteristic parts of a whole; but the principle may be illustrated by a composite design in two colors only. Thus in Fig. 2 the design shown by dotted lines 1 may represent a key color—say rhodamine-pink—and the design shown by full lines 2 a suitable check color of different hue—say methyl-blue.

The check-color design may be separately photographed as black on a white ground by the action of the orange-red spectrum-rays; but the key-color design can only be photographed as black by the action of the yellow-green spectrum-rays, which would also photograph the check color as black and so fail to separate the key design.

It will be evident that the same color which here serves as a check color for the rhodamine-pink-color design would also serve as a check color for a capri-blue key-color design, and there would be a combination of two key-color designs and one check-color design with all of the hues quite distinctive, and the two protected key-color designs would only less perfectly protect the check-color design itself. It is also evident that the check color (methyl-blue) is optically similar to a mixture of the two key colors (capri-blue and rhodamine-pink) and that such a mixture may be



No. 776,470.

PATENTED NOV. 29, 1904.

F. E. IVES.  
SAFETY COMPOSITE COLOR PRINT.

APPLICATION FILED SEPT. 15, 1903.

NO MODEL.

Fig. 1.

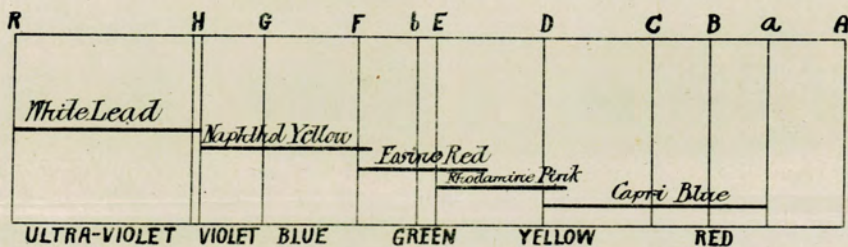


Fig. 2.

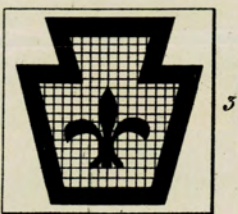
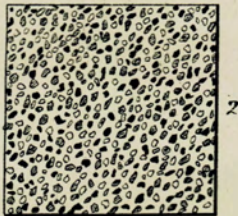
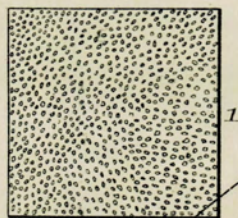


Fig. 3.

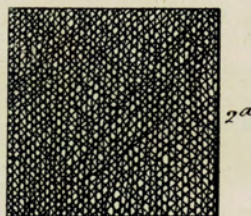
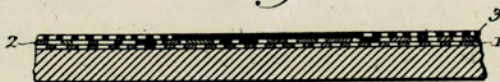


Fig. 5.



Fig. 4.



Witnesses:  
Louis H. Buck  
Titus N. Jones.

Inventor:  
Frederic E. Ives.  
by his Attorneys,  
Howan Howan



IVES - #776,470.

C O O  
DEC 13 1923



## UNITED STATES PATENT OFFICE.

FREDERIC E. IVES, OF WEEHAWKEN, NEW JERSEY.

## SAFETY COMPOSITE-COLOR PRINT.

SPECIFICATION forming part of Letters Patent No. 776,470, dated November 29, 1904.

Application filed September 15, 1903. Serial No. 173,359. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERIC E. IVES, a citizen of the United States, residing in Weehawken, New Jersey, have invented certain Improvements in Safety Composite-Color Prints, of which the following is a specification.

The object of my invention is to provide such a combination of a distinctive design or picture with a multicolor ground as will make the reproduction of the former by photomechanical process difficult or impossible.

In the accompanying drawings, Figure 1 is a diagrammatic representation of the solar spectrum, showing the relation thereto of colors which may be employed in carrying out my invention. Fig. 2 is a view of various elements of a safety composite-color print made in accordance with my invention. Fig. 3 is a view showing one of the elements of the print differing from the corresponding element shown in Fig. 2. Fig. 4 is an exaggerated section of the complete print, and Fig. 5 a view showing superposed the various elements of the composite print.

In carrying out my invention I prepare a ground comprising designs of various bright colors juxtaposed to form a pattern which when viewed from such a distance that the individual color designs are not separately perceived shows a single gray patch of medium luminosity.

An essential feature of my invention is the selection for the printing of such a multicolor ground of a series of colors which have separately considerable luminosity, but which collectively absorb all kinds of visible spectrum-rays which are absorbed by the superposed distinctive design or picture, so that although the latter is well relieved and clearly defined upon the multicolor ground there is no group of spectrum-rays by which it can be separately photographed. The spectrum absorption of such a series of colors is shown diagrammatically in Fig. 1, in which the space A to R represents the solar spectrum with its Fraunhofer lines, and the heavy horizontal lines represent the various printing colors—namely, white lead, naphthol-yellow, yellowish eosin, rhodamine-pink, and capri-blue.

For the most perfect protection it is desirable that the multicolor ground overlies a coarse design or subground printed with the white lead or other colorless material, which while invisible to the sight will be opaque to the ultra-violet rays of the solar spectrum, and hence will affect the photographic sensitive plate, and, further, that the distinctive design or picture be in a transparent color or transparent black.

In case all of the ground colors are transparent a mixture of them will make a good printing color for the distinctive design or picture. A good combination is a spatterwork design in white-lead ink for the subground, a mosaic in transparent naphthol-yellow, eosin-red, rhodamine-pink, and capri-blue for the ground, and a superposed distinctive design printed in a mixture of two or more of the ground colors or their optical equivalent—that is to say, a color having the same absorption-spectrum. Representations of these three elements of the print are shown, respectively, at 1, 2, and 3 in Fig. 2, 1 representing the subground, 2 the ground, and 3 the distinctive design or picture, while at 2' in Fig. 3 is shown a ground design composed of crossing lines instead of a patchwork or mosaic.

A color which is a mixture of two or more of the ground colors is preferred for printing the distinctive picture or design to one which is simply the optical equivalent of such mixture, for the reason that chemical treatment which would affect any one or more of the ground colors would correspondingly affect such element of the mixture with which the distinctive design was printed.

The surface design may be engraved or it may be a photograph or other picture having body-shades and printed in collotype or photogravure. It is evident that this principle of protection may not only be carried out with a set of ground colors which collectively absorb all of the visible spectrum, so that a black or nearly black distinctive design or picture may be protected, but that it can be carried out with a series of ground colors which do not collectively absorb all kinds of visible spectrum-rays, provided that the rays not ab-



sorbed by any of the ground colors are also not absorbed by the distinctive design or picture superposed thereon. For example, the ground colors may be yellowish eosin, rhodamine-pink, and capri-blue and the distinctive design or picture a dark blue which is either obtained by or is optically similar to a mixture of the ground colors. In this case the effect at a sufficient distance will be that of a dark-blue design or picture on a blue-gray ground.

The juxtaposed patches of bright colors which form the ground may either completely cover it without overlapping each other or may to some extent overlap one another or may be separated by white spaces, or the distribution of the colors may be such as to constitute a color design which supplements the darker superposed design, provided that a sufficient number of suitable ground colors be juxtaposed under some important details of the distinctive engraving or picture. It should also be understood that the order in which the colors are laid down may be unimportant, provided that transparent colors are employed, since the effect may then be the same whether the distinctive engraving or picture be printed first or last. Hence the terms "ground" and "subground" as used in the claims are not to be understood as indicating the necessary order of application of these elements of the print.

In further explanation of the protection afforded by the combination of a distinctive design or picture with a ground of juxtaposed color-patches in accordance with my invention it may be assumed that the particolored ground is of two colors, one of which absorbs those spectrum-rays between Fraunhofer lines A and D and the other those between D and E and that the superposed distinctive design is printed in a color which absorbs the spectrum-rays from A to E. The ground colors will in this case appear to the eye as light greenish or peacock blue and bright pink, respectively, and the superposed design a bright true blue. If now an ordinary photograph of this combination is made, the entire surface will reproduce as white, since the photographic action is almost entirely confined to the blue, violet, and ultra-violet rays of the spectrum, which none of the colors named absorb. If instead of an ordinary print a photograph is made by the action of the yellow-green rays of the spectrum, which are absorbed both by the pink brown color and by the true-blue superposed design, both will photograph as black and the integrity of the superposed design will be destroyed. If to avoid the interference caused by the pink elements in the ground the orange or red rays are employed to make the photograph, then the patches of peacock-blue in the ground will photograph as black, as well as the true-blue superposed design, and the integrity of the latter will

again be destroyed. In either case the ground color-patches may photograph darker than the superposed design if the absorption of the latter is weaker, as it may very well be without material alternation of appearance. If the photograph is made by a mixture of all of the spectrum-rays between A and E, both of the ground colors may photograph as dark as the superposed design color if the absorption of the latter is weaker; but if not, and especially if there be white interspaces between the ground colors, the darkened and irregular ground of the photograph of the distinctive design can only be sufficiently eliminated for the purpose of photomechanical reproduction by an intensifying process which would choke up the finer lines or destroy the finer gradations of the design.

It follows that the superposed design, although in color visually quite different from either of the ground colors, cannot be reproduced as a separate print, and in order to reproduce the composite-color print it will be necessary to make one plate of the distinctive design in combination with the peacock-blue color-patches and another plate of the distinctive design in combination with the pink color-patches and then print the two in the respective ground colors with such perfection of registry that the double printing of the lines or shadings of the distinctive design would not be detected.

Given a distinctive design of suitable character and delicacy of definition, its reproduction by double printing would be impracticable, not only because of the difficulty of sufficiently-precise registration, but because even with absolutely-perfect register the two printings would not yield the same character of distinction obtained by three printings in the first instance, and examination with a simple magnifying-glass would show a very marked difference in the character of the original and of such a photomechanical reproduction even at its best. It should also be understood that by printing the superposed distinctive design in a color which instead of absorbing the spectrum-rays from A to E absorbs only those between said C and D & E, which would be a bright violet or purple instead of a blue, the distinctive design will have exactly the same kind of protection afforded by the pink and peacock-blue ground colors, with additional protection due to the fact that double printing with the ground colors will not reproduce the bright violet or purple color of the distinctive design. Such a combination comes within the requirement that the rays not absorbed by any of the ground colors are also not absorbed by the distinctive design or picture superposed thereon and also within the requirement that the multicolored ground is composed of a series of colors which have separately considerable luminosity, but which collectively absorb all



kinds of color-rays which are absorbed by the superposed design or picture.

The essence of my invention is the use of a distinctive design printed with a different color and having a different and preferably greater extension of absorption in the spectrum than any of the ground colors, and therefore of a different hue from any of said ground colors, but which absorbs no part of the spectrum not absorbed by the ground colors taken collectively.

The most successful application of this principle of protection involves the use of no less than two ground colors to protect a distinctive design in any bright color and not less than three to protect a distinctive design in black or a close approximation thereto.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. In a safety composite-color print, a ground of juxtaposed colors in combination with a superposed distinctive design or picture printed with a color having a different hue from any of the ground colors, but absorbing no part of the spectrum which the ground colors, taken collectively, do not also absorb.

2. In a safety composite-color print, a ground of juxtaposed colors, in combination with a superposed distinctive design or picture, printed with a transparent color having a different hue from any of the ground colors, but absorbing no part of the spectrum which the ground colors, taken collectively, do not also absorb.

3. In a safety composite-color print, a ground of juxtaposed colors in combination with a distinctive design or picture in color which is optically similar to a mixture of two or more of the ground colors.

4. In a safety composite-color print, a ground of juxtaposed colors in combination with a distinctive design or picture in transparent color which is optically similar to a mixture of two or more of the ground colors.

5. In a safety composite-color print, a ground of juxtaposed colors in combination with a distinctive design or picture in color which is a mixture of two or more of the ground colors.

6. In a safety composite-color print, a ground of juxtaposed colors in combination with a distinctive design or picture in transparent color which is a mixture of two or more of the ground colors.

7. In a safety composite-color print, a ground of juxtaposed colors in combination with a distinctive design or picture in color which is optically similar to a mixture of all of the ground colors.

8. In a safety composite-color print, a ground of juxtaposed colors in combination with a distinctive design or picture in transparent color which is optically similar to a mixture of all of the ground colors.

9. In a safety composite-color print, a

ground of juxtaposed colors, in combination with a distinctive design or picture in color which is a mixture of all of the ground colors.

10. In a safety composite-color print, a ground of juxtaposed colors, in combination with a distinctive design or picture in transparent color which is a mixture of all of the ground colors.

11. In a safety composite-color print, a distinctive design or picture in a dark color or black on a ground of juxtaposed colors which collectively absorb all kinds of visible spectrum-rays.

12. In a safety composite-color print, a distinctive design or picture in a transparent dark color or black on a ground of juxtaposed colors which collectively absorb all kinds of visible spectrum-rays.

13. In a safety composite-color print, a ground of juxtaposed colors which collectively absorb all of the visible spectrum-rays, in combination with a distinctive design or picture in color of a different hue from the ground colors, but having a spectrum which comprises that of one or more of the ground colors.

14. In a safety composite-color print, a ground of juxtaposed colors which collectively absorb all of the visible spectrum-rays, in combination with a distinctive design or picture in transparent color of a different hue from the ground colors, but having a spectrum which comprises that of one or more of the ground colors.

15. In a safety composite-color print, a ground of juxtaposed colors which collectively absorb all of the visible spectrum-rays, in combination with a distinctive design or picture in color which is optically similar to a mixture of two or more of the ground colors.

16. In a safety composite-color print, a ground of juxtaposed colors which collectively absorb all of the visible spectrum-rays, in combination with a distinctive design or picture in transparent color which is optically similar to a mixture of two or more of the ground colors.

17. In a safety composite-color print, a ground of juxtaposed colors which collectively absorb all of the visible spectrum-rays, in combination with a distinctive design or picture in color which is a mixture of two or more of the ground colors.

18. In a safety composite-color print, a ground of juxtaposed colors which collectively absorb all of the visible spectrum-rays, in combination with a distinctive design or picture in transparent color which is a mixture of two or more of the ground colors.

19. In a safety composite-color print, a ground of juxtaposed colors which collectively absorb all of the visible spectrum-rays, in combination with a distinctive design or picture in color which is optically similar to a mixture of all of the ground colors.

20. In a safety composite-color print, a



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ture in color which is optically similar to a mixture of two or more of the ground colors.

38. In a safety composite-color print, a sub-ground design in white or colorless material  
5 opaque to ultra-violet spectrum-rays, and a ground of juxtaposed colors which collectively absorb all of the visible spectrum-rays, in combination with a distinctive design or picture in transparent color which is optically  
10 similar to a mixture of two or more of the ground colors.

39. In a safety composite-color print, a sub-ground design in white or colorless material  
15 opaque to ultra-violet spectrum-rays, and a ground of juxtaposed colors which collectively absorb all of the visible spectrum-rays, in combination with a distinctive design or picture in color which is a mixture of two or  
20 more of the ground colors.

40. In a safety composite-color print, a sub-ground design in white or colorless material  
25 opaque to ultra-violet spectrum-rays, and a ground of juxtaposed colors which collectively absorb all of the visible spectrum-rays, in combination with a distinctive design or picture in transparent color which is a mixture  
30 of two or more of the ground colors.

41. In a safety composite-color print, a sub-ground design in white or colorless material  
35 opaque to ultra-violet spectrum-rays, and a ground of juxtaposed colors which collectively absorb all of the visible spectrum-rays, in combination with a distinctive design or pic-

ture in color which is optically similar to a mixture of all of the ground colors.

42. In a safety composite-color print, a sub-ground design in white or colorless material  
35 opaque to ultra-violet spectrum-rays, and a ground of juxtaposed colors which collectively absorb all of the visible spectrum-rays, in combination with a distinctive design or picture in transparent color which is optically  
40 similar to a mixture of all of the ground colors.

43. In a safety composite-color print, a sub-ground design in white or colorless material  
45 opaque to ultra-violet spectrum-rays, and a ground of juxtaposed colors which collectively absorb all of the visible spectrum-rays, in combination with a distinctive design or picture in color which is a mixture of all of the  
50 ground colors.

44. In a safety composite-color print, a sub-ground design in white or colorless material  
55 opaque to ultra-violet spectrum-rays, and a ground of juxtaposed colors which collectively absorb all of the visible spectrum-rays, in combination with a distinctive design or picture in transparent color which is a mixture  
60 of all of the ground colors.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FREDERIC E. IVES.

Witnesses:

WILL. A. BARR.

JOS. H. KLEIN.



DEC 13 1923

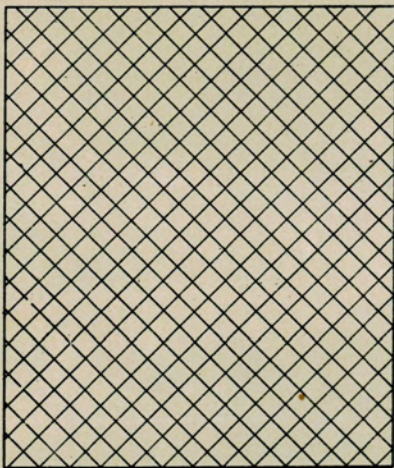
(Specimens.)

C. B. WOODWARD.  
ART OF PRINTING.

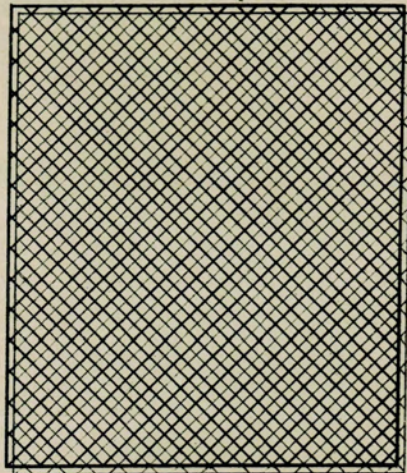
No. 493,850.

Patented Mar. 21, 1893.

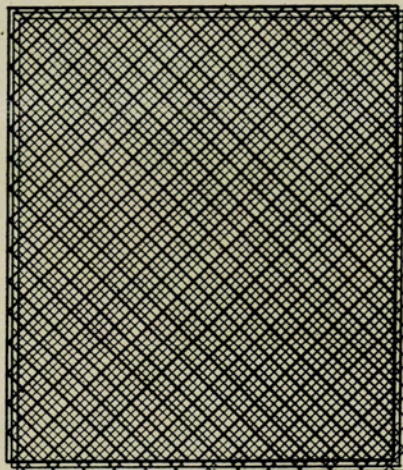
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Witnesses:*

*Geo. L. Nienhoff*  
*M. M. Brown.*

*Inventor:*

*C. B. Woodward*  
*By Fowler & Fowler*  
*Attorneys.*



WOODWARD - #493,850.



DEC 18 1923

# UNITED STATES PATENT OFFICE.

CHARLES B. WOODWARD, OF ST. LOUIS, MISSOURI.

## ART OF PRINTING.

SPECIFICATION forming part of Letters Patent No. 493,850, dated March 21, 1893.

Application filed February 15, 1892. Serial No. 421,617. (Specimens.)

*To all whom it may concern:*

Be it known that I, CHARLES B. WOODWARD, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in the Art of Printing, of which the following is such a full, clear, and exact description as will enable any one skilled in the art to which it appertains to make and use the same.

My invention relates more particularly to photo-mechanical printing, by which term I include pictures printed from cuts, engravings, etchings, lithographs or the like made through the instrumentality of photographic processes. The invention, however, is not necessarily limited to photo-mechanical printing, as it may be employed with cuts or engravings made on metal, stone, wood or other surfaces, by hand, machine, or in any other way. Its use, in connection with the latter class of cuts would be for the purpose of imparting a degree of fineness to such cuts, or to coloring or tinting pictures printed from such latter-mentioned cuts or engravings.

The primary object of the invention, however, is to imitate photographs by mechanical printing, and this involves the art of photography to a more or less extent. Pictures so made by my invention may, therefore, be termed: "mechanical photographs" in that they are printed in a press, and resemble photographs, and to distinguish them from photographs printed by chemical processes, as by the rays of the sun from a negative.

In making photo-mechanical prints, a photograph is first taken of the desired object, (either a photograph of, or a copy of the original, or the original itself) on a prepared surface on metal or stone, and a cut or engraving made therefrom, which cut or engraving is placed in a press, and impressions taken from it. In a cut or photo-engraving there must be either reticulations, cross-lines or a series of shade lines or marks, with interruptions in or blank spaces between them, as without such interruptions or blank spaces no distinctions of light and shade could be made, but only solid black impressions, for instance, could be printed. The mesh of the reticulations or the blank spaces between or interruptions in the shade-lines or marks are of some considerable extent, or in other words,

the lines or marks are some appreciable distance from one another, so that in a picture printed therefrom, the said lines or marks are readily visible, and impart to the picture a more or less coarse appearance, distinguishing it clearly from a photograph of the original, consequently making it appear different from the original, and indicating that the picture is printed from a cut. A common form of these shade marks in photomechanical prints is as follows: The heavily shaded or lightly shaded surfaces present the appearance respectively of black surfaces interposed at uniform intervals by white dots, and white surfaces interposed at uniform intervals by black dots, the intermediate shades being produced by a gradual transition from one of these aspects to the other.

Prints made in accordance with my invention resemble photographs mainly in one or more of the following particulars.

First, the coarse or broken appearance of ordinary prints which is due to the presence of appreciable blank spaces between the shade lines or marks, may be remedied, and the print be made to resemble a continuously shaded surface by printing one or more successive impressions out of register with the first impression, the interstices between or interruptions in the shade-lines or marks of one impression being divided, or partly or entirely filled up by the shade-lines of the other impression or impressions.

Secondly, the color or peculiar tint of photographs may be imitated by fixing the print by means of a heavy impression of black ink, for instance, and also printing one or more impressions of pale brown or other suitable color, slightly out of register with the main impression, the shade-lines or color lines of the brown impression, for instance, falling partly or wholly within the interstices between the shade-lines of said main impression. In this manner the colors of the various impressions may be made to blend, and by careful selection of colors, the peculiar tint of photographs (particularly near the edge of heavily shaded parts of the picture) may be very closely imitated.

Thirdly, the prints may be burnished or coated with a glaze to resemble photographs.

The object of my invention is to impart to



mechanically produced prints (particularly to photo-mechanical prints), the characteristics just described.

My invention has various features applicable to other points besides photo-mechanical prints, but it should be noted that if the shade-lines or marks be very coarse in the single impression, the effect of successive impressions out of register with each other, will often be to render the picture indistinct instead of improving it.

My invention will be best understood by referring to the accompanying drawings.

Figure 1 represents an evenly shaded surface printed by a single impression from a plate such as I may employ, in which the shading is produced by a reticulation of two sets of equidistant parallel lines crossing each other at right angles. The drawings, of course, show these lines and the spaces between them on a very much enlarged scale. Fig. 2 illustrates an evenly shaded surface printed from such plate by two impressions, one heavy and the other light. The second impression is slightly out of register with the first, its lines dividing medially the spaces or interstices between the lines of the first impression. Fig. 3 represents a surface which has received three impressions from said plate, one heavy and two comparatively light, the interstices between the lines of each impression being trisected by the lines of the other two impressions, which is accomplished by suitably shifting between successive impressions, the relative position of the plate and the printed surface.

It is evident that if the spaces between the shading or coloring lines in the single impression (Fig. 1) be so fine that the eye can, with some difficulty distinguish them, there will be great difficulty in distinguishing the shading lines in Fig. 2, and those in Fig. 3 will probably have the appearance of a solidly shaded or colored surface, that is to say, the shade or color-lines will blend, producing various shades tints and colors, the nature of which shades and colors depends on the nature of the shade or color lines or marks composing the various impressions.

It is not necessary that reticulations of solid lines be used. The best results will usually be obtained by distributing the printing or shading lines or marks on the plate in such a manner by dotted lines or in any other convenient mode, that all or a great proportion of the shade or color lines or marks made by the successive impressions will fall in each case into interstices or spaces left blank by previous impressions.

It is not absolutely essential that all the impressions composing a picture be printed from the same plate. Evidently, for example, a picture might be fixed by a heavy black or colored impression from a photo-engraving of the desired object, and the interstices between the shade or color lines or marks might be filled in with one or more impressions from

a plate provided simply with homogeneous shading or coloring lines or marks, and not having the image of the said object thereon. In this manner a blending of shade or color lines would also be achieved, but there would be certain disadvantages in this mode of printing; for instance, the distinctions of light and shade made in the first impression would not be duplicated in the second impression (having simply homogeneous shade-lines or color lines) and again, it would be exceedingly difficult to print two impressions from different plates in such a manner that the shade or color lines would be out of register with each other to a proper and uniform extent throughout. Another disadvantage would be the expense of providing two plates to print the desired picture instead of one.

In practicing my invention I take the impressions preferably upon card-board, heavy paper, or some other material of considerable body which will retain its dimensions and shape, and which presents a finely finished surface properly sized or calendered. I take from an engraving, a series of duplicate impressions which I arrange to come slightly out of register with one another, so that the blank spaces between or interruptions in the shade lines or marks of one impression are divided, or partly or wholly filled out by the shade lines or marks of the other impression or impressions. This I may do by adjusting the cut or engraving out of its former or first position; or by moving the card-board slightly out of position.

In practice I have found that two and sometimes three duplicate impressions out of register with each other answer to produce the effects desired. To illustrate further, suppose, for instance, that the shade lines of the cut or the cross-lines of the reticulations are one-hundredth of an inch apart. In taking the second duplicate impression, I throw the cut or card-board one two-hundredths part or three two-hundredths of an inch for example out of its former position; so that when the second impression is taken the shade lines or cross-lines of such second impression will be between the shade or cross-lines of the first impression. This imparts a fineness of appearance to the picture which cannot be gotten by taking one impression. It will be obvious, of course, that two or more duplicate impressions may be taken out of register with each other, and impart a still finer degree of finish to the picture. The adjustment of the cut or card-board of course, has to be made with the greatest precision.

So far as I am aware, I am the first to take a series of duplicate impressions thrown slightly out of register with one another, from a photo-cut, etching, engraving lithograph, or other cut.

I have found in practice that in taking the series of duplicate impressions referred to, they should, to get the best effect, be with inks, colors or pigments of different body or color. For instance, it is necessary to take at least



one impression in heavy ink to fix the picture, but more than one impression in heavy ink of considerable body and color will blur the picture. The other impressions therefore, should  
 5 be of ink of light color, or slight body. It matters not whether the heavy impression to fix the picture is made first, or after the light impression or impressions, but I have attained the best results by taking the heavy impres-  
 10 sion first, and the light impressions afterward in different colors. By varying the tints and inks I am enabled to produce pictures which resemble photographs and works of art.

My process of mechanically printing such  
 15 pictures is cheaper than printing from photographic negatives by the chemical rays of the sun, as in photography. I am thus enabled to print, in a printing-press, pictures from engravings made from photographs, which  
 20 printed pictures may be made to resemble photographs in every substantial respect. Such pictures have an advantage over so called photographs, in that they are fast and do not fade when exposed to the light, this  
 25 being a serious drawback to photographs made from sun prints. After the picture is printed I may immerse it in a water-proof solution as a means of preservation. I may, also after  
 30 printing, pass the picture through highly-polished heated rolls. These steps further increase the resemblance of my print to that of photographs printed on sensitized papers and finished by the ordinary means in the art of photography.

35 Having fully set forth my improvements, what I desire to claim, and secure by Letters Patent of the United States as my invention, is—

1. The improvement in the art of printing  
 40 from photo-engravings, lithographs, cuts, etchings or other plates which print shades or colors by means of shade or color-lines or marks having appreciable interruptions in or spaces between them, consisting in making successive impressions slightly out of register with each other, the lines or marks made  
 45 by each successive impression falling wholly or partly into the interstices or spaces left blank between the shade lines, or marks of the prior impression or impressions.

50 2. The improvement in the art of printing from photo-engravings, lithographs, cuts, etchings or other plates which print shades or colors by means of shade or color-lines or marks having appreciable interruptions in or spaces between them, consisting in making successive impressions in different colors and slightly out of register with each other, the lines or marks made by each successive  
 55 impression falling wholly or partly into the interstices or spaces left blank between the shade lines or marks of the prior impression or impressions.

3. The improvement in the art of printing  
 65 from photo-engravings, lithographs, cuts, etchings or other plates which print shades or colors by means of shade or color-lines or

marks having appreciable interruptions in or spaces between them, consisting in making successive impressions in different degrees of  
 70 intensity and out of register with each other, the lines or marks made by each successive impression falling wholly or partly into the interstices or spaces left blank between the shade lines or marks of the prior impression  
 75 or impressions.

4. The improvement in the art of printing, which consists in taking a heavy impression from a photo-engraving, lithograph, cut, etching or the like, to set or fix the picture, and  
 80 taking one or more light duplicate impressions out of register with said first impression with ink of less body, substantially as and for the purpose described.

5. The improvement in the art of printing, which consists in taking a series of duplicate impressions in different colors or shades, out of register with one another, from a photo-engraving, lithograph, cut, etching or the like, water-proofing the picture so produced, and  
 90 then polishing or burnishing the said picture to resemble photographic prints, substantially as and for the purpose described.

6. A picture comprising a number of impressions slightly out of register with one another, the marks or lines constituting one impression lying wholly or partly within the  
 95 blank spaces between or interruptions in the lines or marks of the other impressions, and the different impressions lying too closely together to be readily distinguishable by the  
 100 eye when the picture is viewed in the ordinary manner, whereby a blending of the different impressions is produced.

7. A picture comprising a number of impressions differing in shade or color and slightly out of register with one another, the marks or lines constituting one impression lying wholly or partly within the blank spaces  
 110 between or interruptions in the lines or marks of the other impressions, and the different impressions lying too closely together to be readily distinguishable by the eye when the picture is viewed in the ordinary manner, whereby a blending of the different impres-  
 115 sions is produced.

8. A picture comprising a number of impressions, one heavy and the others light and slightly out of register with one another, the marks or lines constituting one impression  
 120 lying wholly or partly within the blank spaces between or interruptions in the lines or marks of the other impressions, and the different impressions lying too closely together to be readily distinguishable by the eye when the  
 125 picture is viewed in the ordinary manner, whereby a blending of the different impressions is produced.

9. A picture comprising a number of impressions slightly out of register with one another, the marks or lines constituting one impression lying wholly or partly within the  
 130 blank spaces between or interruptions in the lines or marks of the other impressions,



the different impressions lying too closely together to be readily distinguishable by the eye when the picture is viewed in the ordinary manner, and said picture having a suitable  
5 glaze whereby it is made to resemble photographs

In testimony whereof I have hereunto set

my hand and affixed my seal, this 13th day of  
bruary, 1892, in the presence of the two  
subscribing witnesses.

CHARLES B. WOODWARD. [L. s.]

Witnesses:

A. C. FOWLER,  
O. T. SMITH.



UNITED STATES AND  
FOREIGN  
PATENTS AND  
TRADE MARKS

FRANK T. WENTWORTH  
PATENT AND TRADE MARK CAUSES  
2 RECTOR STREET, NEW YORK

CABLE ADDRESS:  
"FROWENPAT" NEW YORK  
TELEPHONE:  
0284 RECTOR  
8837 WHITEHALL

December 11th 1923.

A. C. Cary, Esq.,  
c/o American Bank Note Co.,  
70 Broad Street,  
New York City.

My dear Mr. Cary:-

I enclose herewith letter in the Lima matter, together with signed copy for your files. I also enclose all the papers and specimens you submitted to me, and the patents referred to in my other letter. ✓

In my opinion the Lima matter is one largely of attempted extortion or blackmail, but he apparently has no legal grounds upon which to base his claim, and apparently recognized this.

I note by Mr. Ford's memorandum that he apparently refers to issues of 1918 and possibly also 1920, which differ from your present output. In my letter I have been careful to avoid any reference to your present methods, and have gone into no such details as are found in Mr. Ford's notes, which is information that Mr. Lima is not entitled to.

Sincerely yours,

*Frank T. Wentworth*

FTW:K

ENC.



AMERICAN BANK NOTE COMPANY.

SUBJECT

Snr. Lima of Maranhão  
Claim re Multicolor Safety Tints

FROM  
Rio de Janeiro  
TO  
New York

FROM RIO DE JANEIRO TO NEW YORK

DATE Feb. 5th, 1924.



Referring to Mr. Wentworth's letter to you of December 11th last, I have to advise that nothing has come to my attention with regard to Snr. Lima's threat to take action through the press or other means in Rio.

While I do not anticipate any such action on his part, I shall communicate with you promptly, in case he does, before making any move at this end.

Yours very truly,

A handwritten signature in dark ink, appearing to read 'John H. Lane', with a long horizontal flourish extending to the right.

JL/BF.

PACKET



AMERICAN BANK NOTE COMPANY.

New York

to

Rio de Janeiro

SUBJECT

Snr. Lima of Maranhão  
Claim re Multicolor Safety Tints

DATE February 20, 1924.

O. P. W.  
FEB 21 1924

We have read with interest your letter of February 5th and are very glad indeed to know that nothing so far has come of this affair. Doubtless this party, in his last letter, was trying to inveigle us into promising to give him something.

Yours very truly,

Manager Foreign Department

FWG/SD

OTHER COPY IN  
415  
PACKET



AMERICAN BANK NOTE COMPANY.

SUBJECT "MULTICOLOR PROCESS"

FROM RIO DE JANEIRO TO NEW YORK

Montevideo  
DATE December 18th, 1927.

FROM  
Rio de Janeiro  
TO  
New York

The newspaper clipping of which I give a translation below was handed me by Col. Rego of the Banco do Brasil who had held it until I returned to Rio. He lent no importance to the assertions but thought I might be interested.

My files covering these matters are in Rio but I presume it is the same individual who has made similar outbursts in the past. You may be interested in reading what he has to say through the sensational afternoon daily of Rio. The article carries a portrait of the "inventor".

(from "O Globo" of November 28th, 1927.)

THE ETERNAL FATE OF OUR INVENTORS!.

He discovered a color printing process, used to-day by the American Bank, and is in penury

Mr. João Florentino Fernandes Lima is one of the many national martyrs of their own inventive capacity. On coming to Rio for the third time to treat of his interests before the government and the authorities whom he always judged, hopefully, to be capable of favorably considering his just claims, he now sought O Globo to recite his inventor's odyssey. The case is truly curious not only from what Mr. João Florentino, very modest and chagrined, relates but also from the very documents which he submits and all of which confirm his story. He told us:

I was a modest merchant in São Luiz, in Maranhão. Very young, still a beardless youth, I set up a small business with my savings. After some years I prospered and enjoyed good credit and was already importing from abroad. In 1900 I was an amateur photographer and on Sundays made experiments in photoengraving. One day I read in the papers of the discovery in Rio de Janeiro of a large quantity of counterfeit notes. Then suddenly I had an idea: to make non-counterfeitable notes! Up to that time such result had not been obtained anywhere. I therefore became profoundly convinced that, if I could obtain it, I would earn a large reward from the government for such important service rendered the nation. Dominated by that idea, I set about to attain its realization. I began by importing books and materials from abroad, and to study and experiment. But the books, though numerous, were vague and deficient, told little that was needed to know. The task was most difficult. But, between dispiriting and disheartening moments and reanimating moments, by study and through deduction and intuition, I succeeded, little by little in the course of years, in conquering the difficulties. Finally, in 1907 I discovered the "Guaranty Multicolorgraphic Printing," capable of preventing



AMERICAN BANK NOTE COMPANY.

FROM  
Rio de Janeiro  
TO  
New York

SUBJECT "MULTICOLOR PROCESS"

-2-

FROM RIO DE JANEIRO TO NEW YORK

Montevideo  
DATE December 18th, 1927

the counterfeiting of notes. I was left, however, in worse conditions than was Pallissy after he had thrown his furniture and the very flooring of his house into the flames to obtain glazed porcelain...

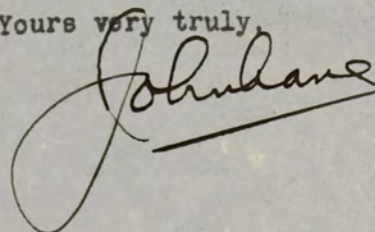
Mr. João Florentino gave a sigh of desolation, fixed his glasses for the eyes tired by so much labor, and continued:

In 1908 I addressed the government, through the lamented Admiral Belfort Vieira (I have proofs of the fact), a memorial and a proposal for the application of my invention. I obtained nothing, on the allegation that the American Bank Note Company held the exclusive right to print Brazilian notes. It was a false pretext, for at that time notes printed in England and, subsequently, in France and Italy were in circulation. I then directed my self to the American Bank itself in 1911. I received from there, where I had forwarded various specimens and explanations of my invention, this letter which you see here and in which it says that the affair did not offer the guarantees which I supposed. How then does it happen that the very notes, made by that same bank and for this same Brazil that I wished to aggrandize, follow rigorously the multicolor-graphic process of printing of my invention? Does it not appear, Mr. Editor, that I was deceived? The worst of it is - not having patented my discovery in the United States as I did here in Rio, and I can prove it with this document - I am precluded from bringing action, not only because I lack resources but also, principally, because I can not obtain any aid from the government of my country.

After giving us abundant explanations regarding his curious invention, which consists in the printing of multicolors by alternately interposing or interweaving blends of colors with lines of an engraving or design, thereby eluding photographic reproductions, Mr. João Florentino, quite moved, made us this final request:

I appeal, Mr. Editor, in the name of justice and ethics, to the patriotism of the press and of all good Brazilians - merchants, bankers, etc. - that they aid me in my just cause. I am entitled at least to a recompense, on which the rest of my ~~days~~ life, so cruelly sacrificed, depends, as I have already contributed to the public and individual welfare which is no longer threatened by dangerous counterfeits of notes.

Yours very truly,



JL



May 1944

December 14th, 1937

any aid from the government of my country. cause I lack resources but also, principally, because I can not obtain it with this document - I am precluded from bringing action, not only because of my discovery in the United States as I did here in Rio, and I can prove Editor, that I was deceived? The worst of it is - not having patented graphic process of printing of my invention? Does it not appear, Mr. Brazil that I wished to aggrandize, follow rigorously the multicolor- it happen that the very notes, made by that same bank and for this same the clerk did not offer the guarantees which I supposed. How then does my invention, this letter which you see here and in which it says that from there, where I had forwarded various specimens and explanations of then directed myself to the American Bank itself in 1911. I received England and, subsequently, in France and Italy were in circulation. I was a false pretext, for at that time notes printed in the American Bank Company held the exclusive right to print Brazilian notes. I obtained nothing on the allegation that Vieira (I leave proofs of the fact), a memorial and a proposal for the In 1908 I addressed the government, through the suggested Admiral Belfort eyes fixed by so much labor, and continued Mr. João Florêncio gave a sign of dissimulation, fixed his glasses for the thing of his house into the flames to obtain liquid porcelain...

After giving us abundant explanations regarding his various inventions which consists in the printing of multicolors by alternately interposing or interweaving blades of colors with lines of an engraving or design, Mr. Lecoq also demonstrated, through photographic reproductions, the various plates made on this final request:

appeal, Mr. Editor, in the name of Justice and, within to the history  
of the press and of all good Brethren - and the -  
that they will in my last name. I am entitled to be a person  
person, on which the rest of my name is to be a person  
legend, as I have already contributed to the public and individual well-  
fare which is no longer threatened by dangerous conditions of notes.

Yours truly

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AMERICAN BANK NOTE COMPANY.

SUBJECT

MULTICOLOR PROCESS

C.P.R.  
JAN 21 1928

DATE

January 20, 1928.

New York  
to  
Rio de Janeiro

We were naturally interested in reading the article from the newspaper handed you by Col. Rego, to which you refer in your letter of December 28th.

This is the same party who took this matter up before. You of course know that his claims are ridiculous and we would pay no attention to anything he may say or have published.

Furthermore, as you know, multicolor process work has practically been discarded by us. We now only do it on reprint orders and then only when we have to.

Yours very truly,

Manager Foreign Department.

FWG/IW